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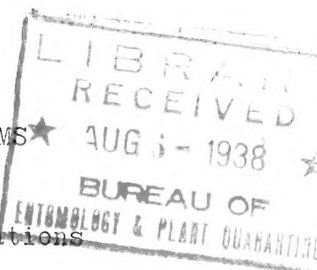
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A SIMPLE AND EFFECTIVE LARVAL TRAP FOR HORNWORMS★

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During the course of a series of investigations on the life history of the tomato worm, Protoparce sexta (Johan.), conducted at Quincy, Fla., in 1936 and 1937, a considerable number of larvae were reared on individual tobacco plants within a cloth-covered cage. As such larvae descended the stalks and burrowed into the ground for pupation during the night, it was found impracticable to obtain definite records on the total duration of the larval period under these conditions. To eliminate this difficulty the trap described below was devised by the writers. This trap consisted of two parts:

- (1) A roofing paper base, 12 inches square.
- (2) A 28-gage, galvanized sheet metal collar, 12 inches high and 10 inches in diameter.

The base was prepared by first cutting a circular hole in the center of a piece of 3-ply roofing paper and then cutting a slit from one edge to the center hole. Care was taken to make the hole of the proper diameter to fit snugly around a tobacco stalk at the surface of the ground. The metal collar was made of galvanized sheet metal in the same manner as a section of stove pipe, excepting that both edges of the seam were allowed to remain loose enough to be hooked together or unhooked at will.

In setting the trap, a small quantity of soil was first scraped away from around the crown of the plant. The roofing paper base was then slipped into place. Next, the metal collar was adjusted around the stem of the plant and the edges were hooked together. Finally, the loose soil was packed around the outside of the bottom of the collar and a small quantity was placed inside around the stem of the plant.

Larvae descending the tobacco stalks into such traps found it impossible to crawl up the metal sides and burrowed into the loose soil within, but were able to penetrate only as deep as the paper base. In order to obtain these individuals it was merely necessary

to unhook and remove the collars and scatter the loose soil. The inclusion of soil within the traps was found to be essential, since in its absence larvae sometimes became restless and discovered a method of exit by climbing the joint formed in hooking the two edges of the collar together.

The parts of the trap and the method of setting are illustrated in figures 1 to 4, inclusive.

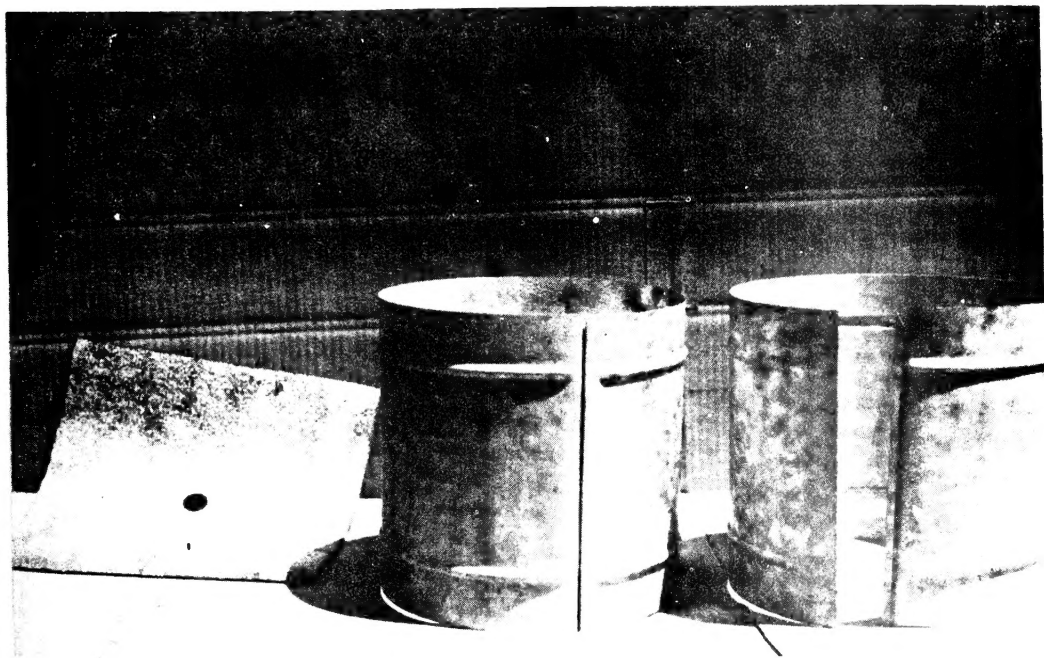


Figure 1.--Parts of the larval trap. From left to right: Roofing-paper base, closed metal collar, and open metal collar.



Figure 2.--Preparing the soil for the reception of the roofing-paper bases. One of the bases is shown in place in the foreground.



Figure 3.--Adjusting the metal collar.



Figure 4.--The trap completely set up.